

FORMING SIDEWALL OXIDE LAYERS FOR TRENCH ISOLATION

Abstract of the Disclosure

5 A shallow trench isolated integrated circuit may be
formed by creating an oxidation enhancing region at the
corner between a semiconductor structure surface and the
trench. This region may be formed by ion implantation or
solid source diffusion in a way which decreases
crystallographic defects. As a result, oxidation at the
trench may be enhanced without adverse effects on leakage
currents. In some embodiments, the impurity laden region
10 is formed first and the trench is etched through the region
leaving an impurity laden remnant at the corner between the
trench and the structure surface.